

# Pediatric Generalized Anxiety Disorder

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## OVERVIEW

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### Practice Essentials

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Generalized anxiety disorder (GAD) is associated with persistent, excessive, and unrealistic worry that is not focused on a specific object or situation.

Children with GAD worry more often and more intensely than other children in the same circumstances. They may worry excessively about their performance and competence at school or in sporting events, about personal safety and the safety of family members, or about natural disasters and future events.

### Signs and symptoms

Children with GAD may experience somatic symptoms such as shortness of breath, rapid heartbeat, sweating, nausea or diarrhea, frequent urination, cold and clammy hands, dry mouth, trouble swallowing, or a "lump in the throat." Problems with muscle tension also can occur, including trembling, twitching, a shaky feeling, and muscle soreness or aches. Patients often complain of stomachaches and headaches. Despite these symptoms, few findings are noted on physical examination.

### Diagnosis

The specific DSM-5 criteria for generalized anxiety disorder are as follows: <sup>[1]</sup>

1. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).
2. The individual finds it difficult to control the worry.
3. For children, the anxiety and worry are associated with one (or more) of the following six symptoms (with at least some symptoms having been present for more days than not for the past 6 months):
  1. Restlessness or feeling keyed up or on edge
  2. Being easily fatigued

3. Difficulty concentrating or mind going blank
  4. Irritability
  5. Muscle tension
  6. Sleep disturbance (difficulty falling or staying asleep, or restlessness, unsatisfying sleep)
4. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
  5. The disturbance is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition (e.g., hyperthyroidism).
  6. The disturbance is not better explained by another mental disorder.

## Management

A cognitive-behavioral approach is likely to be most beneficial. Treatment should consist of individual sessions with family involvement to support the treatment process. Cognitive therapy features may be incorporated into an eclectic approach by highly skilled and experienced therapists.

For patients for whom medication is prescribed, regular appointments with a child and adolescent psychiatrist or developmental-behavioral pediatrician are necessary for the duration of treatment.

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## Background

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Generalized anxiety disorder (GAD) is associated with persistent, excessive, and unrealistic worry that is not focused on a specific object or situation.

Children with GAD worry more often and more intensely than other children in the same circumstances. They may worry excessively about their performance and competence at school or in sporting events, about personal safety and the safety of family members, or about natural disasters and future events.

The focus of worry may shift, but the inability to control the worry persists. Because children with GAD have a hard time "turning off" the worrying, their ability to concentrate, process information, and engage successfully in various activities may be impaired. In addition, problems with insecurity that often result in frequent seeking of reassurance may interfere with their personal growth and social relationships. Further, children with GAD often seem overly conforming, perfectionistic, and self-critical. They may insist on redoing even fairly insignificant tasks several times to get them "just right." This excessive structuring of one's life is used as a defense against the generalized anxiety related to the concern about the individual's overall and specific performance. (See Treatment.)

Little empiric data are available regarding the physiologic indicators of anxiety in children. <sup>[2]</sup> The high cost, lack of normative data, idiosyncratic patterns, and high sensitivity of cardiovascular and electrodermal measures in children contribute to the difficulties in physiologic assessment of anxiety in children. <sup>[3]</sup> (See Differentials.)

## Diagnostic criteria (DSM-5)

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## Complications

Potential complications of GAD include the following (see Prognosis):

- Comorbid depression and other comorbid conditions
- School truancy and withdrawal from other age-appropriate activities
- Strained family relationships when the child's anxiety contributes to irritability, noncompliance, demanding behavior, and/or chronic reassurance seeking
- "Self-medication" leading to substance abuse by adolescents
- Parents' inability to help in the child's treatment or to model adaptive coping/anxiety management because of their own untreated anxiety (or other psychiatric condition)

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## Etiology

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Multiple factors are thought to contribute to the development of generalized anxiety disorder (GAD) and to the broad category of anxiety disorders. Biologic, familial, and environmental factors are considered important. Behavioral inhibition, an early temperament associated with aversion to novel situations, has been found to be associated with later development of anxiety disorders.

Research has demonstrated an association between parents with anxiety disorders and children with behavioral inhibition. The tendency of anxiety to occur in families also has been established. Anxious

parents may genetically predispose their children to anxiety, model anxious behavior, and behave and/or parent in ways that encourage and maintain anxious behavior in the child.

Genetic studies of pediatric anxiety disorders (including generalized anxiety disorder) reveal heritability estimates from 20% to 65%, consistent with a significant genetic contribution. Earlier onset is thought to represent a more genetically vulnerable population. Nonetheless, studies have had difficulties identifying risk genes due to a complex, multifactorial pattern of inheritance. [4]

Environmental factors, such as other parental emotional problems, disrupted attachment, stressful life events, and traumatic experiences, also may place the child at risk for developing GAD.

The role of the family in understanding child anxiety is important, particularly in situations in which the needs of younger children who are developmentally limited in their ability to benefit from direct individual intervention are considered.

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## Epidemiology

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The prevalence of generalized anxiety disorder (GAD) in children and adolescents ranges from 2.9-4.6%. According to the *DSM-5*, the 12-month prevalence for generalized anxiety disorder is 0.9% among adolescents and 2.9% among adults in the general community of the United States. The 12-month prevalence of the disorder in other countries ranges from 0.4% to 3.6%. The lifetime morbid risk is 9.0%. [1]

In childhood, the sex distribution tends to be equal for females and males. In adolescence, a female-to-male ratio of 6:1 has been suggested; however, epidemiologic study results vary.

The age of onset varies, but GAD is more common in adolescents and older children than in young children. In addition, affected adolescents and older children tend to have more symptoms than do affected younger children.

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## Prognosis

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The prognosis is thought to be relatively good when treatment is implemented early and effectively. However, the child remains at risk for developing generalized anxiety disorder (GAD) or other anxiety disorders.

For example, Last and colleagues reported an 80% recovery rate from overanxious disorder during a 3- to 4-year follow-up period. However, 35% of the children developed a new psychiatric disorder in the same interval. [5]

## Mortality and morbidity

Anxiety disorders have a high rate of comorbidity. Children and teens with GAD are also likely to meet criteria for other anxiety disorders and, to a lesser degree, for a depressive or disruptive behavior disorder.

Deaths related to GAD in childhood and adolescence are related more to comorbid conditions, such as depression, than to GAD. Children and adolescents with both depression and an anxiety disorder tend to have more severe forms of depression; therefore, GAD should be viewed as a risk factor for

morbidity and mortality. Anxiety disorders tend to be unstable over time. That is, a child may struggle with anxiety for a long period, but it may not necessarily be a result of the same specific anxiety disorder.

Anxiety is a serious problem in children and adolescents. We now understand that, in addition to deleteriously affecting the child's social and academic functioning, anxiety can cause serious long-term consequences. Many children and teens with one of the anxiety disorders suffer intermittently for the rest of their lives. Other serious psychiatric conditions, such as major depressive disorder and substance misuse, are closely associated with pediatric anxiety if not treated in a timely and effective manner.

GAD also may co-occur with conditions associated with stress, such as irritable bowel syndrome and headaches. The long-term physiologic effects of stress are more likely to cause nonpsychiatric gastrointestinal, cardiovascular, or other sequelae later in life.

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## Patient Education

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Psychoeducation should be part of the treatment process. Patients and parents should have a good understanding of the contributing and maintaining factors of anxiety. Also, they should be clear regarding treatment goals, processes, and expectations.

For patient education information, see the Anxiety Center, as well as Anxiety, Panic Attacks, and Hyperventilation.

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